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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,166	03/14/2002	Mark F. Hurwitz	440500/PALL	1867

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EXAMINER

THERKORN, ERNEST G

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/914,166

Applicant(s)

HURWITZ ET AL.

Examiner

Ernest G. Therkorn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-12, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Onitsuka (U.S. Patent No. 4,557,830) or Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152). At best, the claims differ from each of Onitsuka (U.S. Patent No. 4,557,830) and Le (Great Britain Patent No. 2,201,904) in reciting use of a porous flow distributor. Onitsuka (U.S. Patent No. 4,557,830) is considered to pictorially show a distributor in Figure 1. Le (Great Britain Patent No. 2,201,904) is considered to show a distributor on page 9, lines 16 and 17. In any event, Colvin (U.S. Patent No. 4,894,152) (column 3, lines 3-12) discloses that use of a distributor helps prefilter unwanted substances and ensures wide distribution. It would have been obvious to use a flow distributor in each of Onitsuka (U.S. Patent No. 4,557,830) and Le (Great Britain Patent No. 2,201,904) because Colvin (U.S. Patent No. 4,894,152) (column 3, lines 3-12) discloses that use of a distributor helps prefilter unwanted substances and ensures wide distribution.

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Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Onitsuka (U.S. Patent No. 4,557,830) or Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) as applied to claims 1-4, 6-12, and 14-15 above, and further in view of Ritacco (U.S. Patent No. 4,582,608). At best, the claims differ from each of Onitsuka (U.S. Patent No. 4,557,830) and Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) in reciting use of a curved surface. Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section. It would have been obvious to use a curved section in each of Onitsuka (U.S. Patent No. 4,557,830) and Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) because Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section.

Claims 16-19, 21-39, 42, 43, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152). At best, the claims differ from Le (Great Britain Patent No. 2,201,904) in reciting use of a porous flow distributor. Le (Great Britain Patent No. 2,201,904) is considered to show a distributor on page 9, lines 16 and 17. In any event, Colvin (U.S. Patent No. 4,894,152) (column 3, lines 3-12) discloses that use of a distributor helps prefilter unwanted substances and ensures wide distribution. It would have been obvious to use a flow distributor in Le (Great Britain Patent No. 2,201,904) because Colvin (U.S. Patent No. 4,894,152) (column 3, lines 3-12) discloses that use of a distributor helps prefilter unwanted substances and ensures wide distribution.

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Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) as applied to claims 16-19, 21-39, 42, 43, and 50 above, and further in view of Ritacco (U.S. Patent No. 4,582,608). At best, the claims differ from Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) in reciting use of a curved surface. Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section. It would have been obvious to use a curved section in Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) because Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section.

Claims 40 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) as applied to claims 16-19, 21-39, 42, 43, and 50 above, and further in view of Onitsuka (U.S. Patent No. 4,557,830). At best, the claims differ from Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) in reciting inner and outer tapered sections. Onitsuka (U.S. Patent No. 4,557,830) (column 7, lines 17-27) discloses that an inner and outer tapered section reduces the lag time in the flow in the vicinity of the circumference. It would have been obvious to have inner and outer tapered sections in Le (Great Britain Patent No. 2,201,904) in view of Colvin (U.S. Patent No. 4,894,152) because Onitsuka (U.S. Patent No. 4,557,830) (column 7, lines 17-27) discloses that an inner and outer tapered section reduces the lag time in the flow in the vicinity of the circumference.

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Claims 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onitsuka (U.S. Patent No. 4,557,830) in view of Colvin (U.S. Patent No. 4,894,152). At best, the claims differ from Onitsuka (U.S. Patent No. 4,557,830) in reciting use of a porous flow distributor. Onitsuka (U.S. Patent No. 4,557,830) is considered to pictorially show a distributor in Figure 1. In any event, Colvin (U.S. Patent No. 4,894,152) (column 3, lines 3-12) discloses that use of a distributor helps prefilter unwanted substances and ensures wide distribution. It would have been obvious to use a flow distributor in Onitsuka (U.S. Patent No. 4,557,830) because Colvin (U.S. Patent No. 4,894,152) (column 3, lines 3-12) discloses that use of a distributor helps prefilter unwanted substances and ensures wide distribution.

Claims 1-4, 6-9, and 44-49 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hart (U.S. Patent No. 5,089,125). The claims are considered to read on Hart (U.S. Patent No. 5,089,125). However, if a difference exists between the claims and Hart (U.S. Patent No. 5,089,125), it would reside in optimizing the elements of Hart (U.S. Patent No. 5,089,125). It would have been obvious to optimize the elements of Hart (U.S. Patent No. 5,089,125) to enhance separation.

Claims 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hart (U.S. Patent No. 5,089,125) in view of Ritacco (U.S. Patent No. 4,582,608). At best, the claim differs from Hart (U.S. Patent No. 5,089,125) in reciting use of a curved surface. Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section. It would have been obvious to use a

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curved section in Hart (U.S. Patent No. 5,089,125) because Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section.

Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fraser (U.S. Patent No. 3,771,659). The claims are considered to read on Fraser (U.S. Patent No. 3,771,659). However, if a difference exists between the claims and Fraser (U.S. Patent No. 3,771,659), it would reside in optimizing the elements of Fraser (U.S. Patent No. 3,771,659). It would have been obvious to optimize the elements of Fraser (U.S. Patent No. 3,771,659) to enhance separation.

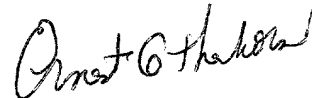
Claims 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraser (U.S. Patent No. 3,771,659) in view of Ritacco (U.S. Patent No. 4,582,608). At best, the claim differs from Fraser (U.S. Patent No. 3,771,659) in reciting use of a curved surface. Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section. It would have been obvious to use a curved section in Fraser (U.S. Patent No. 3,771,659) because Ritacco (U.S. Patent No. 4,582,608) (column 3, lines 46-48) discloses that a curved section is an alternative to a tapered section.

Claims 9-12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fraser (U.S. Patent No. 3,771,659) in view of Colvin (U.S. Patent No. 4,894,152). At best, the claims differ from Fraser (U.S. Patent No. 3,771,659) in reciting use of plural tapered spaces. Colvin (U.S. Patent No. 4,894,152) (column 3, lines 61-

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62) discloses that both ends of the column may be identical. It would have been obvious to use plural tapered spaces in Fraser (U.S. Patent No. 3,771,659) because Colvin (U.S. Patent No. 4,894,152) (column 3, lines 61-62) discloses that both ends of the column may be identical.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (703) 308-0362.



**Ernest G. Therkorn**  
**Primary Examiner**  
**Art Unit 1723**

EGT

September 23, 2003